

LYNCHBURG CITY COUNCIL

Agenda Item Summary

MEETING DATE: **February 25, 2003 Work Session**

AGENDA ITEM NO.: 3

CONSENT:

REGULAR: **X**

CLOSED SESSION:

(Confidential)

ACTION: **X**

INFORMATION:

ITEM TITLE: **Water System Backflow Prevention Program**

RECOMMENDATION: Approve the concept of a water system backflow prevention program and direct City staff to develop details of a program, including proposed changes to City Code, that meet the requirements of the Virginia Department of Health, Waterworks Regulations, 12 VAC 5-590-570 for subsequent consideration by City Council.

SUMMARY: An approved backflow prevention program is required as a condition for the issuance and continued use of the State operation permit issued to the City of Lynchburg waterworks. The purpose of the program is to maintain the integrity of the water system to deliver potable water by preventing the backflow of delivered water back to the distribution system, which may be contaminated and rendered unfit as potable water.

The City has previously adopted the required Virginia Uniform Statewide Building Code (13 VAC5-61) for new construction, which includes provisions for backflow or backsiphonage prevention devices for certain types of facilities. The proposed program will provide in City Code, Chapter 39, Water, that existing facilities that are defined to be a potential hazard will be required to install the necessary backflow prevention devices and that all devices will need to be inspected and tested annually to ensure continued proper operation. A private certified firm engaged by the facility would test the devices. The estimated annual testing fee ranges from \$130 to \$175 for a 1 inch to 3 inch backflow prevention device. Larger devices are usually tested on an hourly rate. Examples of facilities that are required to install, operate and maintain a backflow prevention device and the estimated number of these facilities in the City are attached

One additional position is requested in the proposed Utilities Division FY 04 operating budget to implement the proposed program. The position would be responsible for establishing the data base, establishing and maintaining contact with facilities required to install, maintain and test backflow prevention devices, reviewing annual tests, performing inspections as required and recommending enforcement options if necessary. A vehicle is required as the position would be in the field most of the time visiting facilities and meeting with customers.

The proposed City Code changes would be brought to Council for consideration by June with an effective date of July 1, 2003 and an enforcement date of July 1, 2004. The year allowed from adoption to enforcement would allow affected facilities to come into compliance and provide the Utilities Division the opportunity to identify and work with the affected facilities.

PRIOR ACTION(S): City Code, Water, Sec. 39-15. Protection from contaminants entering water system. Ord. No. O-87-265, 1, approved 11-24-87, effective 1-1-88.

FISCAL IMPACT: The estimated cost of the program for FY 04 is \$129,153 and has been included in the recommended Utilities Division operations budget for FY 04. This includes one additional position and an additional vehicle. Continuing costs are estimated at \$100,858 per year. The FY 04 Proposed Water Operations Budget is \$4,681,987. No new City fees are proposed to support this program.

CONTACT(S):

Stephen Bontrager, Utilities Director, 847-1322

Tim Mitchell, Assistant Utilities Director, 847-1322

Bruce McNabb, Public Works Director, 847-1362

ATTACHMENT(S):

Section 39-15 of City Code (Protection from contaminants entering water system)
Example Facilities Requiring a Backflow Prevention Device
Sample Diagram and Vault Location Specification

REVIEWED BY: lkp

It shall be unlawful and a class 3 misdemeanor for any person to place or cause to be placed around or near any of the fire hydrants or water meters of the city any goods or foliage or other thing in such a manner as to obstruct the free access to such hydrants or water meters. (Code 1959, § 32-15)

▼
Sec. 39-14. Protection of meters from hot water; repair of meters injured by hot water.

The occupant of any real estate on which a water meter has been installed, which has a hot water connection on the service pipe so that there is a possibility of hot water entering the service pipe and injuring the meter, shall have installed, at his own cost, a proper double check valve in such service pipe between the meter and the hot water connection, so as to prevent hot water from flowing back into the meter. In addition, he shall have installed, likewise at his own expense, a water relief and temperature valve between the boiler and the check valve. In any case where the meter or meter disc is injured by the return of hot water from the premises into the meter, the meter shall be repaired by the department of public works and the cost thereof borne by the occupant of the property. All charges arising under this section shall be collectible in the same manner as are other charges for water and water connections; and for failure to pay such charges within ten (10) days after presentation, water may be cut off from the premises and not restored until such charges have been paid. (Code 1959, § 32-6)

▼
Sec. 39-15. Protection from contaminants entering water system.

The owner of any property on which a water connection has been installed shall be responsible for control against contaminants entering the city water system. The owner shall provide, install and maintain approved devices to ensure said contaminants do not enter the system in cases where the potential for a hazard exists. The owner shall provide access to the city for inspection of said devices and furnish such reports and documentation of maintenance as may be required by the utilities administrator. Installation of said devices shall not relieve the owner of responsibility or liability related to contamination of the city water system. The utilities administrator may require measures to be taken by the owner where it is determined that a potential hazard exists. (Ord. No. O-87-265, § 1, 11-24-87, eff. 1-1-88)

▼
Sec. 39-16. Responsibilities for maintenance of water services.

The city shall supply and maintain water in sufficient quantities and pressures as are necessary for the efficient operation of the city's water system. The owner of any property served by the city's water system shall be responsible for installing and maintaining any devices necessary for sustaining pressures meeting the owners' requirements. The city shall install and maintain all water services from the connection to the city main to and including the water meter and box. The owner shall be responsible for maintaining the service line from the water meter to his property in good working condition and shall be responsible for

Backflow Prevention Program

Potentially Affected Water Accounts

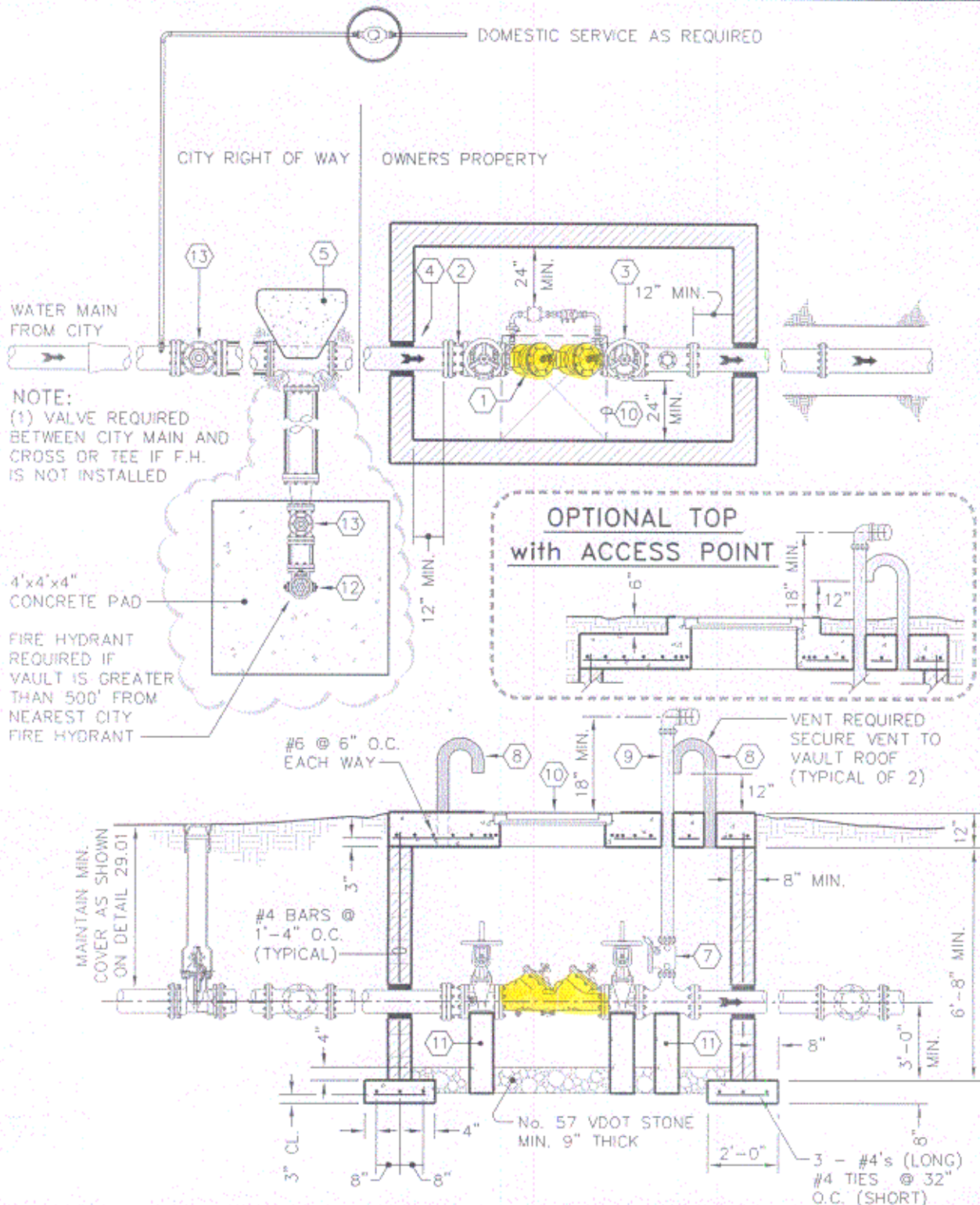
The number and type of accounts that could be affected by the proposed program are shown in the table below. The information is from the City water billing system. This is only an estimate as the types of facilities required by the Virginia Department of Health Services does not match the description captured on the billing system. For example: 12VAC 5-590-640 E1, lists “hospitals, mortuaries, clinics, veterinary establishments, nursing homes, and medical buildings”. The billing system could hold these account in institutional or commercial categories.

<u>Account Classifications</u>	<u>Number of Accounts</u>
Commercial	1382
Industrial	102
Municipal	56
Pools	2
Institutional	298
Total	1,840 accounts

Total water accounts: 19,598

Other Water Systems

The Utilities Division has contacted the following water providers in the State to determine the extent of their backflow prevention programs; Fredricksburg, Hopewell, Newport News, Norfolk, Richmond, Winchester, Roanoke, Charlottesville, Danville, Portsmouth, Fairfax County, Colonial Heights, Chesapeake, Chesterfield County, Spotsylvania County, Amherst County, Bedford County, Bedford and Campbell County. Responses range from minimal efforts to fully functioning programs that include inspection, testing and record keeping similar to the proposed program.



THE CITY OF LYNCHBURG

FIRE LINE DOUBLE DETECTOR CHECK VALVE

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE:
NOT TO SCALE

REVISION DATE:
09-04-02

DETAIL #
29.20

SHEET #:
1 of 2